

MACCS 200 LEVEL
Training & Readiness
(T & R)
Instruction

Data Link Symbology
A-16




Supplemental
Handout

DATA LINK SYMBOLOGY




THERE ARE THREE BASIC SYMBOL SHAPES:

	<u>CLASSIFICATION</u>	<u>COLOR</u>
CIRCLE	(FRIENDS)	(GREEN)
DIAMOND	(HOSTILES)	(YELLOW)
SQUARE	(UNKNOWNNS)	(YELLOW)




DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
PENDING	YELLOW 	UNKNOWN Pending General	
EVALUATED UNKNOWN	YELLOW 	UNKNOWN Evaluated General Bomber Fighter AEW/RECCE/ EW/DECOY Helo/Trans Missile Platform Zombie	
ASSUMED ENEMY	YELLOW 	UNKNOWN Assumed Enemy General Bomber Fighter AEW/RECCE/ EW/Decoy Helo/Trans Missile Platform X-Ray	





DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
ASSUMED FRIEND	YELLOW 	UNKNOWN Assumed Friend General Bomber Fighter AEW/RECCE/ EW/DECOY Helo/Trans Missile Platform	
INTERCEPTOR	GREEN 	FRIEND Interceptor Fighter General Unavailable RESCAP (with SAR Modifier) CAP RTB (with modifier)	
F-14	GREEN 	FRIEND Interceptor/ Fighter F-14 (AEW)	F-14 symbol will be displayed for F-14 aircraft, or locally controlled aircraft with esatblished two-way TADIL-C datalink communications






DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
MISCELLANEOUS FRIEND	<p>GREEN</p> 	<p>FRIEND</p> <p>General</p> <p>General</p> <p>Neutral</p> <p>Nonmilitary</p> <p>Missile</p> <p>Training</p> <p>RTB (with modifier)</p> <p>Special mission</p> <p>General</p> <p>AEW/ARP/ABCCC</p> <p>EW (with modifier)</p> <p>Recon</p> <p>Kilo/Yoke</p> <p>Strike Support</p> <p>ASW</p> <p>Logistics</p> <p>General</p>	
FAKER	<p>GREEN</p> 	<p>FRIEND</p> <p>General</p> <p>Neutralized</p> <p>Faker</p> <p>Special Mission</p> <p>Faker</p>	
NATO FAKER	<p>GREEN</p> 	<p>FRIEND</p> <p>Special Mission</p> <p>Jammer</p> <p>(Faker NATO)</p>	

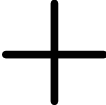

DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
HELICOPTER	<p>GREEN</p> 	<p>FRIEND</p> <p>Helicopter</p> <p>General</p> <p>ASW</p> <p>Gunship</p> <p>Recon/RECCE</p> <p>Logistic</p> <p>Troop-Lift</p> <p>Medevac</p> <p>SAR (with modifier)</p>	
CAS/DAS	<p>GREEN</p> 	<p>FRIEND</p> <p>Strike Support</p> <p>CAS/DAS</p> <p>Interdiction</p>	
TANKER	<p>GREEN</p> 	<p>FRIEND</p> <p>Strike Support</p> <p>Tanker General</p> <p>Tanker (Boom)</p> <p>Tanker (Drogue)</p>	
HOSTILE	<p>YELLOW</p> 	<p>HOSTILE</p> <p>General</p> <p>Genera</p> <p>Bomber</p> <p>Fighter</p> <p>Helo/Trans</p> <p>Missile Platform</p> <p>Jammer (with modifier)</p> <p>AEW/RECCE/EW/</p> <p>Decoy (with modifier)</p>	





DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
MISSILE	YELLOW 	HOSTILE General Missile	
TACAN	GREEN 	FRIEND Station Air TACAN (Point)	
ECM FIX (POINT)	YELLOW 	HOSTILE ECM Fix General (Point)	
HAZARD (POINT)	ORANGE 	HOSTILE Hazard (Point) General NAV Mine Impact Point Ground Zero AIM/WPN entry point ECM Decoy	
AIRBASE	GREEN 	FRIEND Supporting Unit Airbase	


DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
REFERENCE POINT	<p>GREEN</p> 	<p>FRIEND</p> <p>Reference Point</p> <p>General</p> <p>Marshall Point</p> <p>Waypoint</p> <p>Corridor TAB</p> <p>PIM</p> <p>Dspn Center</p> <p>Form Center</p> <p>Search Area Point</p> <p>Station General</p> <p>General</p> <p>Tomcat</p> <p>Picket</p> <p>Rendezvous</p> <p>Replenishment</p> <p>Rescue</p> <p>Station Air</p> <p>General</p> <p>CAP</p> <p>AEW</p> <p>ASW Fixed Wing</p> <p>ASW Helo</p> <p>Replenishment</p> <p>Strike IP</p>	
FIRE UNIT	<p>GREEN</p> 	<p>FRIEND</p> <p>Supporting Unit</p> <p>SAM Site</p>	


DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
OTHER CENTER	<p>GREEN</p> 	<p>FRIEND</p> <p>Site</p> <p>General</p> <p>FPU/FRU</p> <p>PU</p> <p>RU</p> <p>Supporting Unit</p> <p>General</p> <p>MHQ</p> <p>ASRT</p> <p>DASC</p> <p>FACP</p> <p>ADA/BOC/TDS</p>	Own TAOC. Displayed at selected symbol brightness
EMERGENCY FIX	<p>GREEN</p> 	<p>FRIEND</p> <p>Emergency</p> <p>General</p> <p>Downed aircraft</p> <p>Man in water</p> <p>Distressed vessel</p>	Displayed at selected symbol brightness
RADAR	<p>GREEN</p> 	<p>FRIENDLY RADAR SITES</p> <p>OWN TAOC RADAR and remote RADARs, including other site RADARs</p>	
HOSTILE POINT	<p>YELLOW</p> 	<p>HOSTILE</p> <p>Strike Hostile</p> <p>General</p> <p>Troops</p> <p>Airbase</p> <p>Artillery</p> <p>Convoy</p> <p>Rail</p> <p>Bridge</p>	





DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
SHIP-UNKNOWN	<p>YELLOW</p> 	<p>SHIP</p> <p>Unknown</p> <p> Pending</p> <p> General</p> <p>Evaluated</p> <p> General</p> <p> CV</p> <p> CA/DD</p> <p> FPB</p> <p> Amphibious</p> <p> Nonmilitary</p> <p> Surfaced Sub</p> <p> SIGINT</p> <p>Assumed Friend</p> <p> General</p> <p> CV</p> <p> CA/DD</p> <p> FPB</p> <p> Amphibious</p> <p> Nonmilitary</p> <p> Surfaced Sub</p> <p> SIGINT</p> <p>Assumed Enemy</p> <p> General</p> <p> CV</p> <p> CA/DD</p> <p> FPB</p> <p> Amphibious</p> <p> Nonmilitary</p> <p> Surfaced Sub</p> <p> SIGINT</p>	




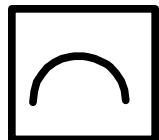

DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
SHIP-FRIEND	<div>GREEN</div> <div></div>	<div>SHIP</div> <div>Friend</div> <div>General</div> <div>Neutral</div> <div>Nonmilitary</div> <div>Auxiliary</div> <div>General</div> <div>Tanker</div> <div>Cargo</div> <div>Troop</div> <div>Repair</div> <div>Hospital</div> <div>Special</div> <div>General</div> <div>FPB</div> <div>Minelayer</div> <div>O RSH</div> <div>SIGINT</div> <div>ACV/H</div> <div>Surfaced Sub</div> <div>Mines</div> <div>Line</div> <div>General</div> <div>CV</div> <div>CA</div> <div>DL</div> <div>DD</div> <div>DE</div> <div>Patrol</div> <div>Amphibious</div> <div>General</div> <div>L-Platform</div> <div>L-Ship</div> <div>L-Craft</div> <div>Troop</div> <div>Cargo</div> <div>Command</div> <div>LHA</div>	

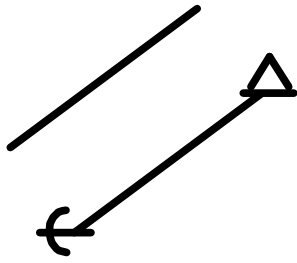
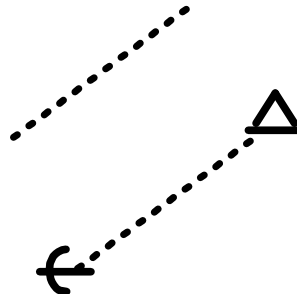
DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
SHIP-HOSTILE	<p>YELLOW</p> 	<p>SHIP Hostile General CV CA/DD FPB Amphibious Nonmilitary Surfaced Sub SIGINT</p>	
POINTER (RECEIVE)	<p>ORANGE</p> 	<p>SHIP Hostile General CV CA/DD FPB Amphibious Nonmilitary Surfaced Sub SIGINT</p>	<p>Pointer will appear on receiving console, and all other consoles with same position selected</p> <p>Letter W, T, E, or S indicates position type</p> <p>Symbol will blink when used as internal comm mark</p>
POINTER (TRANSMIT)	<p>ORANGE</p> 	<p>POINTER Data link Internal comm</p>	<p>Pointer will appear on sending console, and all other consoles with same position selected</p> <p>Letter W, T, E, or S indicates position type</p> <p>Symbol will blink when used as internal comm mark</p>
LOW ALTITUDE AIR DEFENSE TEAM (LAAD)	<p>GREEN</p> 		<p>Displayed when SYM DSPL FFS, OTHER CENTER VFS is selected</p>

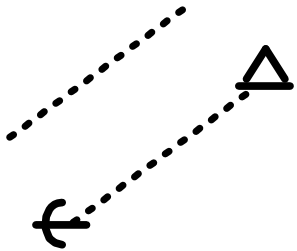
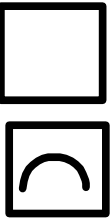
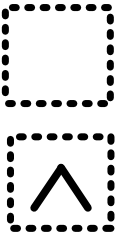
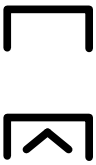
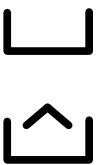
DATA LINK SYMBOLOGY

TITLE	SYMBOL	ID CATEGORIES	COMMENTS
FINGER POST	YELLOW 		
HOOK MARKER	GREEN 		
SITE (OUT OF DISPLAYABLE RANGE)	GREEN 	FRIEND Site General FPU/FRU PU RU	When OTHER CENTER VFS in SYM DSPL FFS array is selected, all sites and supporting units are displayed. any units outside of 1024 by 1024 dm system grid, but within the 2048 by 2048 dm system grid, will be displayed at one-half their range from system center.
FRIENDLY RAID GATE	GREEN 		30 max raid gates, friendly and hostile
HOSTILE RAID GATE	YELLOW 		30 max raid gates, friendly and hostile


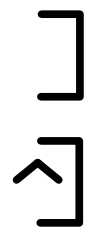

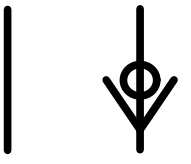
DATA LINK SYMBOLOGY

MODIFIER	EXAMPLE	COMMENTS
<p>SIZE EXPANSION</p> <p>SYMBOL EXPANDS TO TWO TIMES NORMAL SIZE</p>		<p>Occurs when track is designated as lost</p> <p>When basic symbol expands, modifier RTB, SAR, jammer, engaged, other report, TADIL-C, down-link, incoming order will expand. Pairing lines and ASCII will not expand.</p>
<p>BLINK CONDITION</p> <p>BLINKS AT 0.5 SECOND RATE. AFTER 20 SECONDS, BLINKS AT 2 SECOND RATE</p>		<p>Symbols are blinked as alert for lost track, emergency, category conflict, and unassigned hostile. Pairing lines are blinked for impossible intercept, unacknowledged FU assignment. Pointer symbol is blinked for internal comm mark.</p> <p>When symbol blinks, modifiers of RTB, SAR, jammer, do not intercept, and engaged will blink. Solid pairing lines, dashed pairing lines, other report, ATDL report, TADIL-C up-link, TADIL-C down-link, incoming order, outgoing order, and ASCII character blink is separately controlled</p>
PAIRING LINE		<p>Display for symbols that are paired, join-up, waypoint, engaged, incoming orders, outgoing orders</p> <p>Color and intensity are same as for friendly symbol</p>
DASHED PAIRING LINE		<p>Indicates trial pairing or trial intercept. Also used between track and base on RTB incoming or outgoing order and between track and unit to receive control on transfer control incoming or outgoing order</p>








DATA LINK SYMBOLOGY

TITLE	SYMBOL	COMMENTS
DASH-DOT-DOT PAIRING LINE		Indicates data source for paired symbols is EW or intelligence. Pairing line is removed when either symbol is dropped, or a category is changed to "surface" or "spare"
OTHER REPORT		Displayed with air and surface tracks when data source is via TADIL-A, TADIL-B, or LINK-1 from units with reporting responsibility
ATDL REPORT		Displayed when data used is received from missile battery via ATDL
TADIL-C DOWN-LINK		Displayed when data used is received from TADIL-C aircraft via TADIL-C
TADIL-C UP-LINK		Displayed when track is transmitted to TADIL-C aircraft via TADIL-C. If TADIL-C up-link and down-link conditions coexist, down-link modifier has precedence for display

DATA LINK SYMBOLOGY

TITLE	SYMBOL	COMMENTS
INCOMING ORDER		<p>Displayed with any data link message requiring operator action. Orders that cause display are: engage, investigate/assign, cover, cease engage, cease fire, hold fire, salvo, RTB, transfer control, handover, and change data. Status messages that cause display are no track, engaging target, TUMA, weapons tight, weapons free, and RTB</p> <p>Modifier blinks at 2-Hz rate; modifier will temporarily supersede other report, TADIL-C up-link, TADIL-C down-link, outgoing order, and ATDL report</p> <p>Status cleared by CANTCO or WILCO</p>
OUTGOING ORDER		<p>Displayed upon operator initiation of data link transmission. Commands that cause display are: engage, investigate/assign, cover, cease engage, cease fire, hold fire, salvo, RTB, transfer control, handover, initiate track, priority kill, destroy, challenge, disengage, drop track, weapons free, weapons tight, change data, and clear IFF</p> <p>Order modifier will blink under following conditions: receipt of CANTCO, receipt of CANTPRO, no machine receipt to order, no receipt compliance within 2 minutes of machine receipt, to addressed order</p>
RETURN TO BASE (RTB)		<p>Displayed only on friendly air tracks designated as RTB</p> <p>Mutually exclusive with SAR and jammer. Latest designated supersedes others</p>
JAMMER		<p>Displayed only with helo and faker when designated by operator as having jammer capabilities</p> <p>Mutually exclusive with RTB and jammer. Latest designated supersedes others</p>

DATA LINK SYMBOLOGY

TITLE	SYMBOL	COMMENTS
SEARCH AND RESCUE (SAR)	 	<p>Displayed only with helo and special mission</p> <p>Mutually exclusive with RTB and jammer. Latest designated supersedes others</p>
ENGAGED	 	<p>Displayed only with interceptor, F-14 interceptor, evaluated unknown, assumed friend, assumed enemy, hostile, faker, fire unit, ship, site. Not used in join-up or waypoint assignment</p> <p>Color same as basic symbol</p>
DO NOT INTERCEPT (DNI) OR WEAPONS EXCLUSION	 	<p>Displayed when DNI is designated on hooked track or when weapon is designated for exclusion for semi or automatic trials</p>
ASCII CHARACTER - AIR TRACKS	<p>C, E, H, K, R, S, T, M, I, D, 3, U, or N</p> 	<p>Only one ASCII character is displayed at a time with the following priority</p> <ol style="list-style-type: none"> Emergency PU Track Heads up Salvo Conflict Kill Invalid NATO Mode 3 Special Mode 3 SPI Track Data Recording Rate Aided Manual Auto Tentative <p>Symbols with following modifiers blink:</p> <ol style="list-style-type: none"> Emergency Salvo Conflict

DATA LINK SYMBOLOGY

TITLE	SYMBOL	COMMENTS
EMERGENCY	E	Denotes emergency on friendly track. Manually entered or by receipt of emergency IFF code.
CONFLICT	C	Denotes identity or category conflict
KILL OR GRAND SLAM	K	Denotes kill or effective engagement. Operator entered or received by data link
HEADS UP	H	Received by data link. Denotes engagement not effective or FU engaged to other track than assigned. May be operator entered
SALVO	S	Denotes salvo condition either operator generated or received by data link
RATE-AIDED	R	Denotes operator initiation of rate-aided track
MANUAL AUTO	M	Denotes track was established manually as auto track, but is not being tracked automatically based on RADAR reports
TENTATIVE	T	Denotes tentative track established by operator
DATA RECORDING	D	Denotes that data recording initiated for track
SPI TRACK	I	Denotes special processing indicator track
SPECIAL MODE 3	3	Denotes track is responding with special nonemergency Mode 3 code
PU TRACK	U	Denotes track is identified as participating unit
INVALID NATO MODE 3	N	Denotes friend track has invalid Mode 3 code for current validity interval

DATA LINK SYMBOLOGY

TITLE	SYMBOL	COMMENTS
ASCII CHARACTERS FIRE UNITS	B, K, F, O, R, T, and A	
ENGAGEMENT BROKEN	B	Denotes assigned engagement has been broken by FU Normally received by data link, but may be be operator entered
ENGAGEMENT EFFECTIVE	K	Denotes engaged target is destroyed or neutralized
FIRING	F	Denotes FU is firing at assigned target
OUT OF ACTION	O	Denotes FU is out of action
READY	R	Denotes FU is available for assignment
TRACKING	T	Denotes FU is tracking assigned target
WEAPONS ASSIGNED	A	Denotes that requested assignment has been assigned to FU

ASCII CHARACTER - SURFACE TRACKS KILL OR GRAND SLAM	K	Denotes kill or effective engagement against surface track
ASCII CHARACTER - POINTS KILL OR GRAND SLAM	K	Denotes kill or effective engagement against point